Québec Occupational Health and Safety Plan: 1979-1988

A Ten-Year Statistical and Financial Overview

CSST
Commission de la santé et de la sécurité du travail

Québec Occupational
Health and Safety
Plan: 1979-1988

**A Ten-Year Statistical
and Financial Overview**

90-03586/

Message from the President

It is a pleasure indeed to present this second edition of the CSST's *Statistical and Financial Overview,* which we see as another step toward meeting the growing need for information on how the Québec occupational health and safety plan operates that prompted the publication of the first edition in 1987.

When I was appointed to the CSST in May 1986, I felt it essential that we provide the general public with a document that would explain the major features of the plan in simple and concise terms. The response to the first edition was very favourable, not only among the workers and employers who are the Commission's partners in health and safety, but also among our counterparts elsewhere in Canada and the United States. Not to mention the reporters and other media people who found in the Overview the information they needed to understand the plan as a whole.

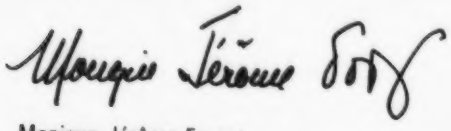
The same spirit of openness and desire to broaden the debate on health and safety issues has led the Commission to update the *Statistical and Financial Overview* in a slightly revised format.

We felt that our discussion of industrial accidents and occupational diseases should include the broader context. There are, of course, the accidents, injuries and loss of bodily integrity described in the statistics. But behind the figures are the victims: the men and women who work in specific branches of industry and places of employment. This is why we have attempted to highlight and describe the current trends in the labour market in Québec as they have evolved over the last ten years. Also, we now have a much richer body of data on Québec's Protective Reassignment Program for Pregnant and Breast-feeding Workers, the only one of

its kind in the world. Since this program has been in operation for eight years, it was important to report on its performance. Finally, many new facts and figures have been added to the Comparisons with Other Plans section to provide a more comprehensive framework.

The complementary objectives of keeping people well-informed as to the nature, frequency and seriousness of occupational injuries, and making them aware of their economic and social consequences, are basic to the Commission's mandate of promoting increased consciousness of the risks and dangers related to the practice of a trade or profession among the general population, and of helping employers and workers to more effectively target their actions in the area of occupational health and safety.

I sincerely hope that the provision of accurate and relevant information such as you will find here will assist all concerned in making the enlightened choices needed to keep the plan operating efficiently for many years to come.



Monique Jérôme Forget
President and Chief Executive Officer

This document was prepared by the Direction des communications of the Commission de la santé et de la sécurité du travail.

Editor
Danièle Noël

Research and statistical analysis

Direction de l'analyse et de la gestion de l'information
Andrée Morin

Service de la statistique
André Thibodeau
Martine Allaire

The data cited on the following pages was taken mainly from CSST files.

Translation and production of English-language edition
Services d'édition Guy Connolly

Graphic design
Nolin Larosée et Associés inc.

For reasons of concision and readability, the masculine pronoun is used to designate persons of both genders.

Commission de la santé et de la sécurité du travail. Reproduction is permitted with proper attribution of the source.

Dépôt légal – 3e trimestre 1989
Bibliothèque nationale du Québec

ISBN 2-550-19804-2

La présente publication est disponible sur demande en version française.

The Commission de la santé et de la sécurité du travail du Québec (CSST) administers the social contract between two and one-half million workers and their employers in the area of occupational health and safety. The Commission, which is governed by a joint Board of Directors comprising the President and Chief Executive Officer and an equal number of representatives of employees and employers, works with its two partner groups to ensure that the plan performs as efficiently and effectively as possible. The CSST has some 2,800 employees, over half of whom work in the Commission's 21 regional branches throughout the Province of Québec.

The Québec government set up the CSST in 1980 to replace the Commission des accidents de travail. The new Commission was assigned three major functions: the compensation and rehabilitation of the victims of occupational injuries; prevention and inspection; and financing.

Compensation and Rehabilitation

The first function of the CSST is to compensate the victims of industrial accidents or occupational diseases and provide them with physical, social and professional rehabilitation services tailored to their needs. The Commission also provides compensation for pregnant or breast-feeding workers whose working conditions may adversely affect their pregnancy or endanger the health of their unborn or breast-fed child.

Prevention and Inspection

The primary responsibility for eliminating risks of accident or occupational injury lies with workers and their employers. The CSST assists these two groups by promoting their integrated and participatory management of prevention, and by funding health, information and research services. The Commission also inspects workplaces, and monitors compliance with occupational health and safety legislation, regulations and standards.

Financing

The CSST's third role, that of a public insurance company, involves the classification of employers, the setting and collection of employer contributions, and the administration of reserve funds.

The Québec
Labour Market

Industrial Accidents and
Occupational Diseases

The Cost and Administration
of the Occupational Health
and Safety Plan

Protective Reassignment of
Pregnant or Breast-feeding
Workers

Prevention

Comparisons with Other
Plans

The frequency and seriousness of industrial accidents and occupational injuries depend to a large extent on the industrial and demographic structure of a given society. The purpose of the following overview of the labour market in Québec is to put this phenomenon into perspective and to give the reader a fuller understanding of the province's occupational health and safety plan.

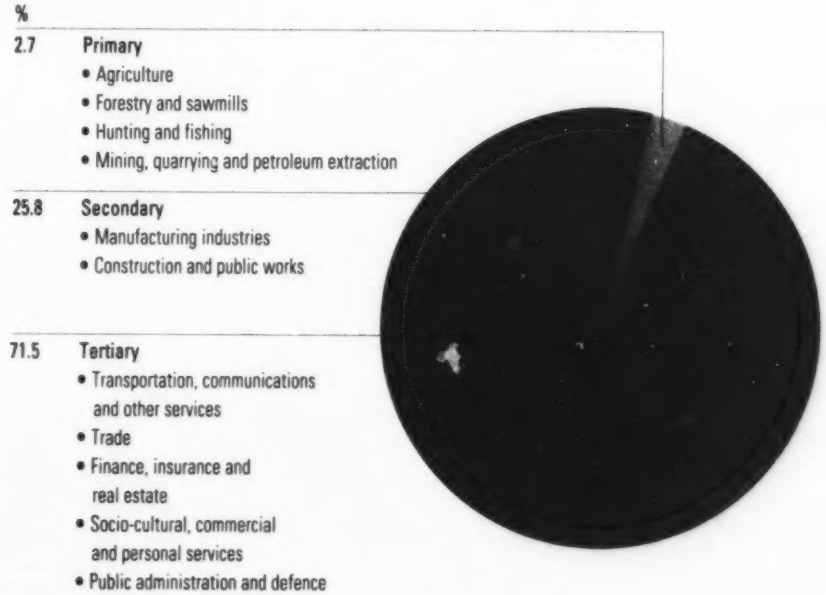
The first thing to remember is that the Québec occupational health and safety plan covers workers in all sectors of the economy, with the exception of professional athletes and domestics. A total of 2,452,000 workers were covered by the plan in 1988.

However, the province's work force is quite unevenly distributed. For example, the areas of economic activity with the largest concentrations of workers are socio-cultural, commercial and personal services (35.5%), manufacturing (21.1%) and trade (18.7%). If we group the various branches together under the conventional three-sector classification, we find that the primary and secondary sectors employ respectively 2.7% and 25.8% of the work force, while the tertiary or service sector alone employs 71.5% of all workers in Québec.

Significant changes in the Québec labour market over the last decade include:

- **a marked shift in employment toward the tertiary sector;**
- **an aging of the work force;**
- **an increase in the proportion of women in the work force.**

Distribution of workers covered by the plan, by area of economic activity – 1988



One noteworthy development in recent years is the marked shift in employment toward the tertiary sector. In 1981, the tertiary sector employed slightly less than two-thirds of all workers. Today, it accounts for three-quarters of the work force.

Many demographic studies point to a general aging of the population. The phenomenon is also reflected in the work force. In the ten years from 1979 to 1988, the proportion of workers aged 15 to 24 dropped by 5.7%, the proportion of workers aged 25 to 34 and 35 to 44 increased respectively by 1.5% and 5.4%, while the proportion of workers aged 45 or over remained more or less unchanged. In other words, over 55% of the workers covered by the plan were aged 25 to 44 in 1988, compared to 48.7% in 1979.

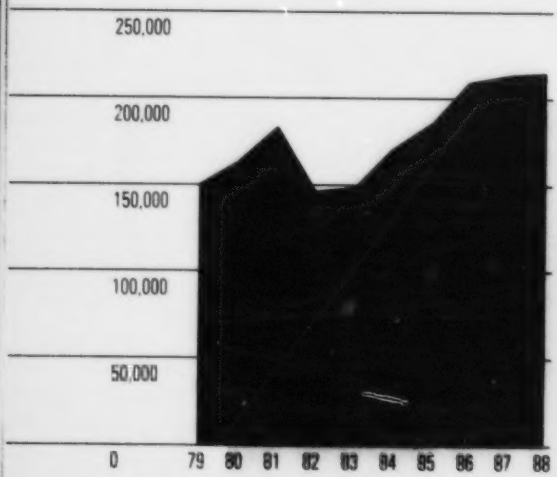
Another significant change is the growing percentage of women in the work force. Women represented 37.9% of all workers in 1979, and over 42.6% in 1988.

Industrial Accidents and Occupational Diseases

Over the last ten years, the number of occupational injuries resulting in time away from work rose steadily in Québec, except for a period of decline between 1981 and 1984 due to the economic slowdown. Comparing the 161,000 occupational injuries that occurred in 1979 to the roughly 213,000 injuries that occurred in 1988, we find an increase of 32%.

However, in addition to compensating the victims of occupational injuries occurring in the course of a given year, the CSST pays benefits to the victims of injuries which occurred in preceding years. It is estimated that in 1987, all of these injuries taken together resulted in a loss of some six million days of work.

Number of occupational injuries — 1979-1988



What kind of workers are the most at risk for industrial accidents or occupational diseases? Statistical analysis indicates that age, sex, place of work and working conditions are all determining factors.

For example, in 1987, the workers who were most frequently victims of occupational injuries were those aged 15 to 24. Their occupational injury rate was 12.2 injuries per 100 workers, compared to an average of 8.2 for their older colleagues. The nature of their duties, their inexperience, and the lack of training and information on health and safety for younger workers appear to be the most adequate explanations of such a high rate, given that the number of injuries declines steadily as they grow older. Men sustain more injuries than women, because men still tend to practise most of the higher-risk trades. The rate of injury per 100 workers was 12.5% for men and 3.8% for women.

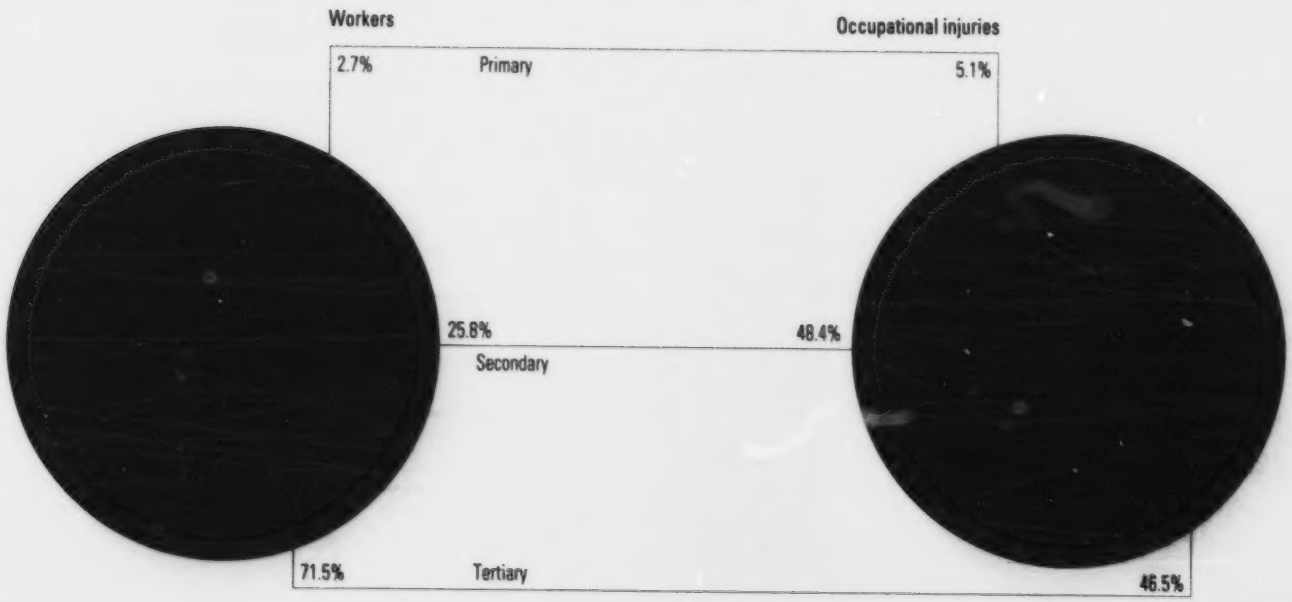
- **The number of occupational injuries has increased by 32% over the last ten years.**
- **Occupational injuries are estimated to have caused six million days of absence from work in 1987.**
- **When all other variables are considered equal, workers aged 15 to 24 belong to the age group that is most prone to suffering occupational injuries.**
- **The branches of industry in which workers are most likely to sustain an occupational injury are forestry and sawmills, construction and public works, and manufacturing.**
- **The chances of injury are three times higher for a worker in the primary and secondary sectors than for a worker in the tertiary sector.**

The workers in some areas of economic activity are more often affected by occupational injuries than others because of the risks inherent in their jobs. For instance, the average rate of injury for all sectors in 1987 was 8.8 per 100 workers, but there were significant variations. At one end of the scale, we have the sector of financial services, insurance and real estate, where there was only 1 injury per 100 workers. At the other extreme, the rate was 22.9 per 100 workers in forestry and sawmills. Furthermore, the chance of a worker in the primary and secondary sectors sustaining an injury was three times higher than for a worker in the tertiary sector.

Number of occupational injuries per 100 workers by sector of economic activity – 1987

Sector	Number of injuries per 100 workers
Forestry and sawmills	22.9
Construction and public works	16.5
Manufacturing industries	16.2
Hunting and fishing	15.4
Mining, quarrying and petroleum extraction	13.6
Agriculture	10.7
Transportation, communications and other public services	9.2
Trade	7.5
Public administration and defence	6.4
Socio-cultural, commercial and personal services	4.7
Finance, insurance and real estate	1.0

Distribution of workers and occupational injuries by sector of economic activity — 1988



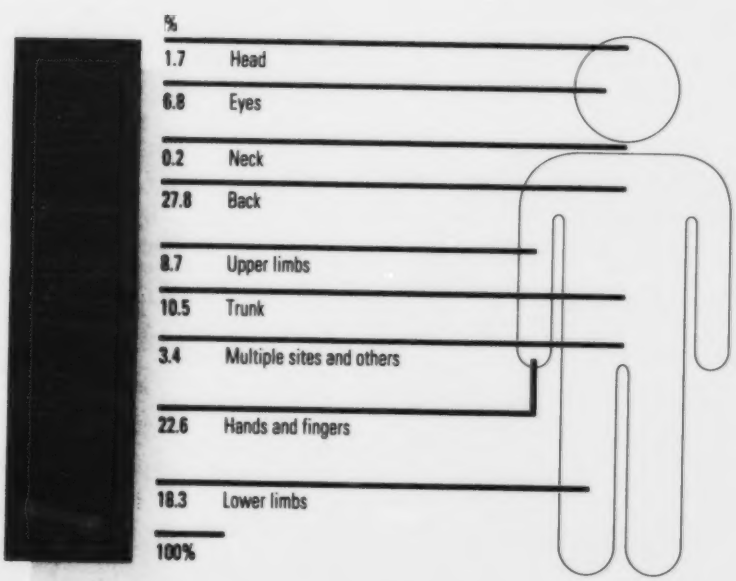
A certain pattern seems to emerge as far as the time when injuries occur is concerned. Workers injure themselves more frequently on Monday than on Tuesday, on Tuesday than on Wednesday, and so on. In other words, the statistics show that injuries are more frequent earlier in the week. This pattern has also been observed in the United States.

Some parts of the body are more affected than others when injury does occur. The most frequently injured parts are the back (27.8% of all cases), the hands and fingers (22.6%) and the lower limbs (18.3%).

Over one-quarter of the injuries result in back disorders. Recent figures show that the compensation of back disorder victims alone amounts to 36% of the total amount paid out in income replacement benefits. In 1988, for example, back disorders cost the CSST an estimated $300 million. Proportionally, workers aged 35 to 39 were the most affected, and when an accident occurred, 32% of the cases involved women and 24% involved men. Back

- **More than one-quarter of all occupational injuries result in back disorders.**
- **In 1988, back disorder-related injuries cost the CSST some $300 million.**
- **Workers aged 35 to 39 belong to the age group that is most prone to suffering back disorders.**
- **Back disorder problems represent 40% of all injuries with a recovery period greater than 90 days.**

Sites of injuries — 1987



disorder victims tended to be concentrated in medical and social services (44.8%), transportation and storage (31.1%), communications, energy transport and other public services (30.2%). The occupational categories most affected were, respectively, nurses and auxiliaries (54.8%), medical staff (37.7%) and truck drivers (33%). Of the injuries for which the compensation period exceeds 90 days, 40% were back disorder-related, and back disorder victims remained the group with the highest rates of relapse, recurrence and aggravation.

Deafness is by far the occupational disease for which the CSST receives the greatest number of claims. Analysis of the 2,902 occupational disease claims for 1987 shows the following distribution:

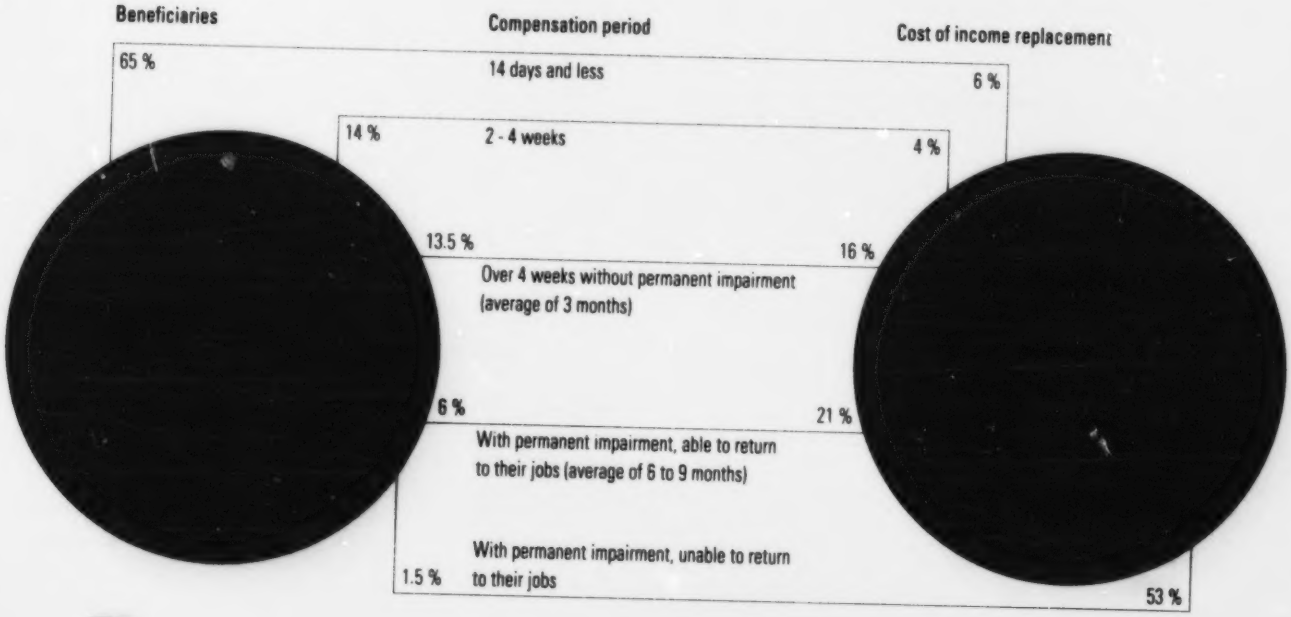
Deafness	32.0%
Disorders of the musculo-skeletal system	26.0%
Dermatosis	10.5%
Infectious or parasitic diseases	7.4%
Poisoning or indisposition	3.8%
Respiratory allergies	2.5%
Pathologies	1.7%
Pneumoconiosis	1.4%
Other	14.7%

The length of the compensation period varies significantly from one type of occupational injury to another. An estimated 79% of victims are away from work for less than one month, and 13.5% for approximately three months. However, the length of absence may be longer for the 7.5% who sustain a permanent impairment, depending on whether or not they are capable of returning to work. This latter group is also the one that generates the highest compensation costs over the long term. In fact, the cost of benefits for a single permanently impaired worker can easily climb to $300,000 over an extended period of time.

In addition to providing for the payment of benefits to compensate for the injured worker's loss of income, the Act recognizes the right to rehabilitation to enable the worker to recover his autonomy and return to productive employment. Of all workers whose injury leaves them with a permanent impairment, roughly 35% require rehabilitation services to be able to return to work.

- **In 7.5% of all cases of occupational injuries, workers suffer permanent impairment and are absent from work for more than six months.**
- **Approximately 13,500 workers have benefited from rehabilitation programs since August 1985.**
- **In 1987, 167 workers died as a result of an industrial accident, while 46 died as a result of an occupational disease.**
- **The mortality rate is highest in the mining, quarrying and petroleum extraction sector, followed by the construction and public works sector, and then by the transportation, communications and other public service sectors.**

Length of compensation period and cost of income replacement



Since the Industrial Accidents and Occupational Diseases Act came into effect in 1985, some 13,500 workers have been granted rehabilitation services. Workers are entitled to three types of rehabilitation programs: physical, social, and occupational. The goal of physical rehabilitation is to eliminate or alleviate the physical disability and, if necessary, help the worker to develop his residual capabilities. Social rehabilitation is intended to assist workers in overcoming the personal and social consequences of their injuries, adapt to their new situation and recover their autonomy in everyday activities. The purpose of the third type, occupational rehabilitation, is to help workers return to suitable productive employment given their functional limitations.

In 1987, 213 workers died as a result of an industrial accident or an occupational disease. Death occurred in the workplace in 122 of these cases.

Industrial accidents were the cause of 80% of the deaths. The average age of the victims was 40, and the majority of them had sustained multiple injuries. The average age of those workers who died of an occupational disease was 64. The mortality rate was highest among workers in mining, quarrying and petroleum extraction; 36 workers died of pneumoconiosis, of which asbestosis is the most frequent form. The next highest mortality rates occurred in construction and public works (30 deaths) and in transportation, communications and other public services (27 deaths).

The Cost and Administration of the Occupational Health and Safety Plan

From a financial point of view, the Québec occupational health and safety plan has also evolved over the last ten years. Whereas the CSST incurred expenditures of approximately $560 million in 1979, the figure was close to $1.7 billion in 1988.

The breakdown of costs was as follows for 1988: 54.8% for occupational injuries, 2.4% for protective reassignment of pregnant or breast-feeding workers and 18.6% for the actuarial reserve, which serves to cover the future costs of compensation. In other words, 75.8% of the CSST's disbursements went to compensation. The other expenditures included the cost of prevention (4.1%), administration (8.5%), special items (10.4%) and other costs (1.2%).

- **Over the last ten years, CSST expenditures rose from $560 million in 1979 to $1.7 billion in 1988.**
- **Compensation for occupational injury victims, and the protective reassignment program, account for roughly 75% of the expenditures of the CSST.**

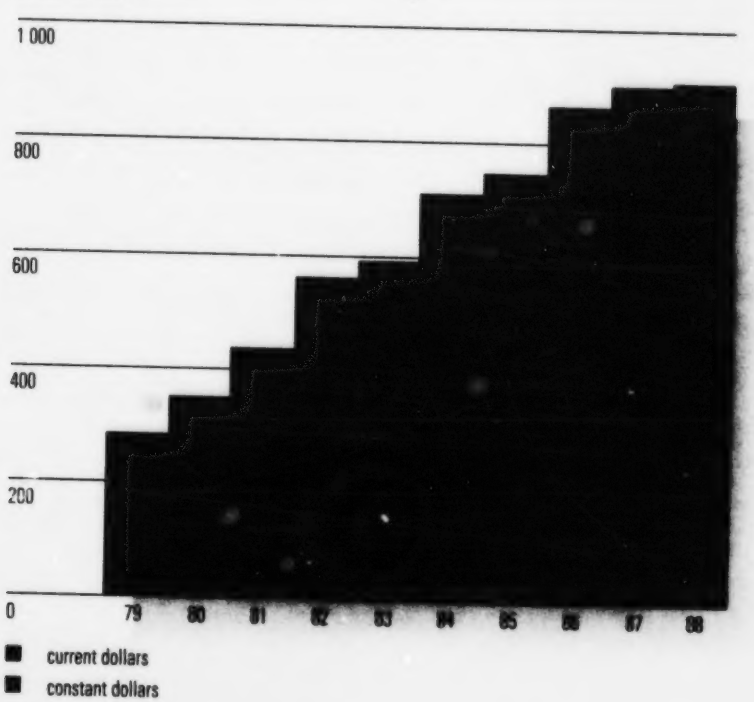
CSST Spending — 1988
(in millions of $)

904.1	Occupational injuries
307.5	Increase of the actuarial reserve
38.9	Protective reassignment of pregnant or breast-feeding workers
68.3	Prevention
140.5	Administrative costs
19.8	Other costs
171.8	Exceptional items

Total: $1,650,900,000

Spending on compensation for occupational injuries has risen sharply in ten years, from $285.6 million in 1979 to $994.1 million in 1988. The increase is due primarily to the cost of living, the increase in the number of occupational injuries, rising medical costs, salaries (which are the basis upon which entitlements are calculated) and finally, to the real increase in the amount of compensation per injury. Since 1979, constant dollar expenditures on compensation have almost doubled.

Spending on compensation — 1979-1988
(in millions of $)



The bulk of CSST expenditures on compensation (50.2%) went to temporary disability and income replacement benefits. The other items, in descending order of importance, were: benefits for permanent disability (20.8%), medical assistance and rehabilitation fees (16.2%), benefits for bodily injury (3.2%) and death benefits (9.6%). It is interesting to note that expenditures related to occupational injuries represented only 28% of total compensation expenditures for 1988. Most of the benefits paid in the course of a given year are paid to victims of occupational injuries which occurred in previous years.

Although the Commission's revenues have increased considerably over the last few years, they have not kept pace with expenditures. This resulted in an operating deficit which reached a peak of $547 million in 1985. The range of corrective measures taken included an increase in the average rate of assessment, which was set at $2.05 in 1986 and then raised to $2.50 in 1987 and $2.75 in 1988. The contributions received by the Commission in 1988 enabled it to cover all of its financial requirements and operate with a balanced budget for the first time since 1981.

- **The occupational health and safety plan is entirely financed by Québec's employers, with the exception of inspection costs, which are assumed directly by the provincial government.**
- **For the first time since 1981, the CSST received in 1988 enough revenue from employer contributions to cover all of its financial needs and eliminate its operating deficit.**
- **Over the last ten years, the acceptance rate for occupational injury compensation claims has remained around 97%.**

Spending on compensation — 1988
(in millions of $)

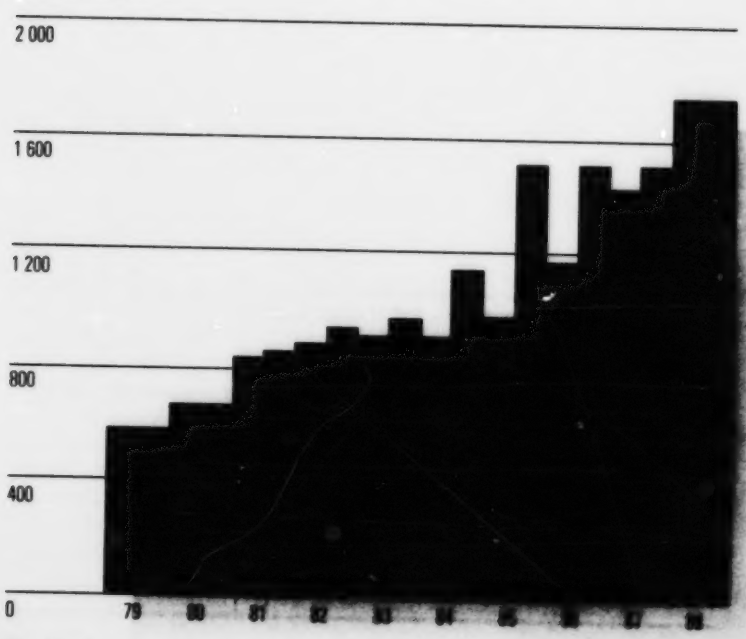
453.9	Temporary disability and income replacement
112.5	Medical assistance
34.2	Rehabilitation
187.8	Permanent disability
29.3	Bodily injury
86.4	Death benefits

Total: $904,100,000

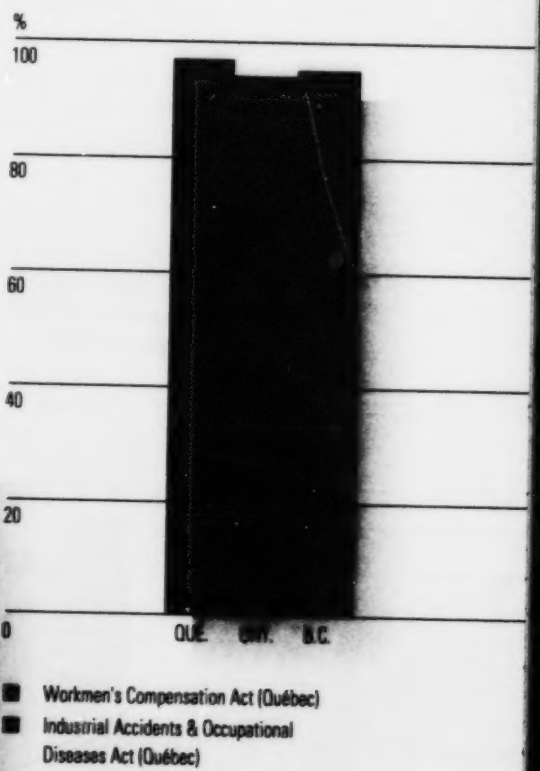
In 1988, the Commission's revenues totalled $1.754 billion, including $1.438 billion in employers' contributions for the year, $315 million in investment and interest income, and $1 million from miscellaneous sources. With the exception of inspection costs, which are directly absorbed by the government, the occupational health and safety plan is entirely financed by the province's employers.

Over the last ten years, the acceptance rate on claims for occupational injuries has remained quite stable. For example, between 1979 and 1984, while the Workmen's Compensation Act was in effect, the rate was 96.5%. Following the introduction of the Industrial Accidents and Occupational Diseases Act, the rate rose slightly, hovering around 97% for the last three years. This means that the CSST rejects about 3% of the claims made every year, as compared to the higher rejection rates of 6% and 5% in Ontario and British Columbia respectively.

Revenue and expenditures — 1979-1988
(in millions of $)



Acceptance rate for occupational injury claims



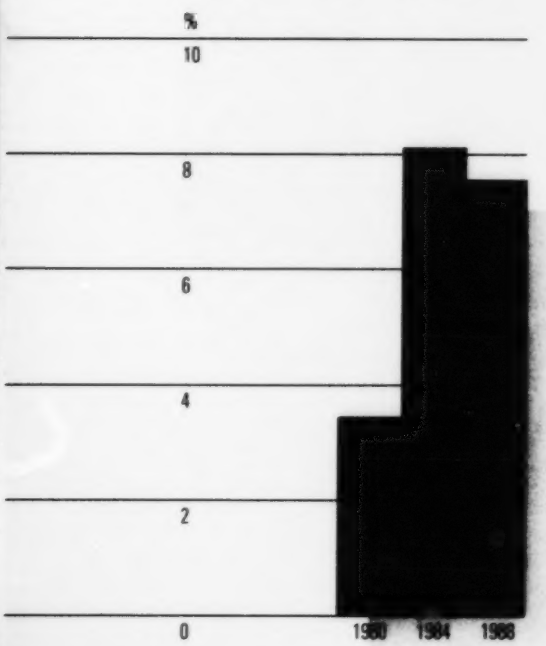
The number of claims has almost tripled since 1980. The curve remained relatively flat during the 1982-83 recession, but rose sharply in 1984. Although the number of appeals dropped following the introduction of the Industrial Accidents and Occupational Diseases Act, the figures increased again in 1987 and 1988.

However, if we compare the number of requests for review of compensation claims with the number of accepted claims, the percentage of appeals was 3.4% in 1980, 8.1% in 1984, and 7.5% in 1988. During that period, 75% of the appeals were made by workers, and 35% of the Commission's decisions in these cases were overturned.

Since 1986, the Commission has taken a number of steps to improve the plan's administration. The payment periods for benefits have been shortened. In 1986, the average time elapsed between receipt of a worker's claim and authorization of payment was 11.2 days, compared to 9.6 days in 1987. Similarly, to facilitate the injured worker's return to work, the average payment period for physiotherapy and occupational therapy treatments was cut from 12.0 days in 1986 to 8.9 days in 1987, and to 5.7 days in 1988.

Since 1986, the payment periods for workers' benefits and the average waiting period for physical and occupational therapy have been shortened.

Change in the proportion of applications for review of claims for compensation, relative to accepted claims — 1980, 1984, 1988



Time elapsed before compensation and physiotherapy and occupational therapy treatments – 1986-1988

	Periods of payment	Periods of treatment (physical and occupational therapy)
1986	11.2 days	12.0 days
1987	9.6 days	8.9 days
1988	8.2 days (est.)	5.7 days

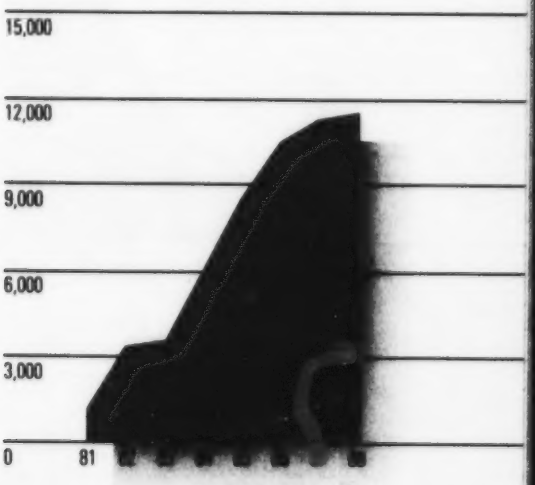
Protective Reassignment of Pregnant or Breast-feeding Workers

The Industrial Accidents and Occupational Diseases Act also introduced a program of protective reassignment to specifically protect pregnant and breast-feeding workers whose working conditions may involve a physical risk for themselves or for their unborn or breast-fed child. If reassignment to other duties is impossible, the worker is withdrawn from her job and given benefits.

Some 55,000 women have benefited from this program since its inception in 1981. The number has risen from roughly 1,000 women in 1981 to nearly 12,000 in 1988. The proportion of women who were working while pregnant and applied for protective reassignment has also gone up appreciably from 21.8% in 1985 to 29.5% in 1988.

Approximately 55,000 workers have benefited from the protective reassignment program over the last eight years.

Beneficiaries of the protective reassignment program for pregnant or breast-feeding workers — 1981-1988

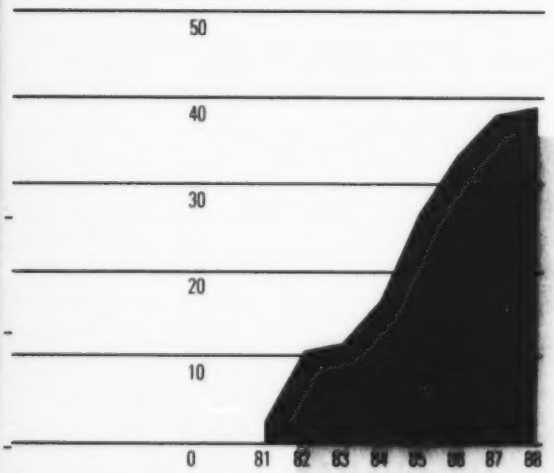


This change is largely due to the broader dissemination of information and a better understanding of the risks for pregnant or breast-feeding workers. It has also resulted in an increase of expenditures from $2.6 million in 1981 to $38.9 million in 1988.

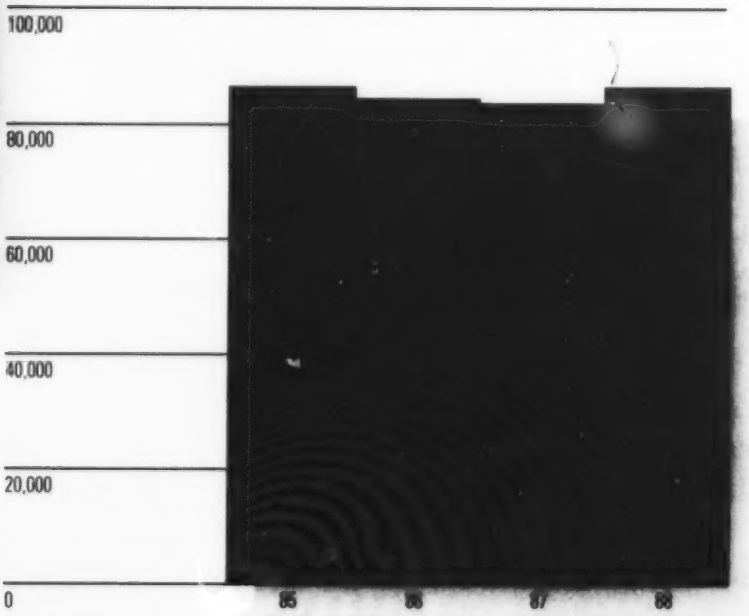
Forty-five percent (45%) of the women who exercised their right to protective reassignment were between 25 and 29 years of age. The proportion rises to 80%, with an average age of 26, when we add those under 25. The beneficiaries were concentrated in particular areas such as medical services, other services and trade. The predominant occupations were: nurses or auxiliaries (16%), waitresses or barmaids (15%) and cashiers or clerks (10.7%).

- **Expenditures related to the protective reassignment program totalled $38.9 million in 1988.**
- **In 1988, nearly 30% of all women working while pregnant availed themselves of their right to protective reassignment.**
- **The highest number of protective reassignments was due to ergonomic and chemical agents.**

Spending related to protective reassignments of pregnant or breast-feeding workers — 1981-1988
(in millions of $)



Change in the number of births, women working during their pregnancy, applications for protective reassignment and protective reassignments granted — 1985-1988



It is interesting to note that between 1985 and 1988, the proportion of women who were granted protective reassignment remained relatively stable among cashiers and clerks, increased among waitresses and barmaids, and decreased among nurses and auxiliaries. Two factors may explain the decline among the latter phenomenon: first of all, statistics from the Ordre des infirmières et infirmiers du Québec show that the average age of its members is 37 years, while 80% of protective reassignments are granted to women 29 years old or less; secondly, the practice of assignment to other duties appears to be increasingly common in the province's hospital system.

The major causes of protective reassignment are ergonomic agents (61.6%) and chemical agents (10.9%). The average duration of protective reassignment is about 15 weeks, but it varies significantly depending on the nature of the agent. The longest reassignments are caused by biological and chemical agents (19.3 and 22.4 weeks), the shortest by ergonomic agents (13.4 weeks). Excluding the first five days, paid by the employer, the average benefits were $3,372 in 1987, with a maximum of $5,036 (biological agents) and a minimum of $2,907 (ergonomic agents).

Protective reassignments by type of agent – 1987

Type of agent	%	Average compensation	Average duration (weeks)
Chemical	10.9	$5,036	22.4
Physical	4.3	$3,965	17.7
Ergonomic	61.6	$2,907	13.4
Biological	3.8	$5,341	19.3
Affecting occupational safety	5.0	$4,351	16.9
Miscellaneous	13.0	$3,045	13.5
Undetermined	1.4	$3,325	15
Combined	100.0	$3,372	15

Prevention

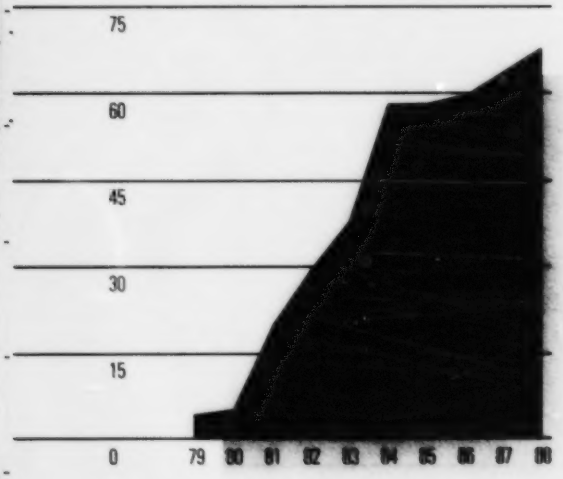
The intent of the Industrial Accidents and Occupational Diseases Act is to compensate for, if not preclude, the various negative physical, professional, and socio-economic consequences faced by industrial accident or occupational disease victims.

In keeping with the adage that "an ounce of prevention is worth a pound of cure," the CSST began implementing an action plan to promote direct involvement in prevention by workers and employers as early as 1980. The application of the plan's provisions is governed by the Occupational Health and Safety Act, which instituted the principle of joint participation by workers and employers in all matters relating to occupational health and safety, recognized rights and obligations for both parties, and designated persons responsible for health and prevention.

The gradual introduction of measures designed to serve as incentives for prevention has led to a progressive rise in the Commission's spending on prevention over the last ten years. Prevention-related expenditures represented only 0.9% of total expenditures in 1979, but had risen to 4.1% in 1988. The increase is due in part to three factors: the creation of the Institut de recherche en santé et en sécurité du travail (IRSST) in 1981; the designation by regulation of priority groups I, II and III in 1982, 1983 and 1985 respectively; and the establishment of joint sector-based associations.

- **In 1988, the CSST spent $68.3 million on prevention.**
- **Occupational health services account for the largest proportion (56%) of funds allocated to prevention.**

Spending on prevention — 1979-1988
(in millions of $)



Occupational health services rank first among expenditures (56%), followed by the Institut de recherche en santé et en sécurité du travail, whose budget of $13.4 million serves to promote and conduct research directed at a general improvement of the health and safety of workers. Since 1987, the emphasis at the IRSST has been on safety-oriented research, and considerable efforts have been made to popularize and disseminate the findings to a broad audience.

Training and information services are provided by the employers' and union associations and by a network of 13 joint sector-based associations. The latter, which had a budget of $10.7 million in 1988, serve over 940,000 workers in some 64,000 establishments by giving training courses and sessions, preparing prevention guides, and advising companies and agencies on health and safety matters.

Spending on prevention — 1988
(in millions of $)

38.4	Occupational health services
0.2	Sponsorships
13.4	Institut de recherche en santé et en sécurité du travail
10.7	Joint sector-based associations
5.1	Union and employers' associations
0.5	Other associations

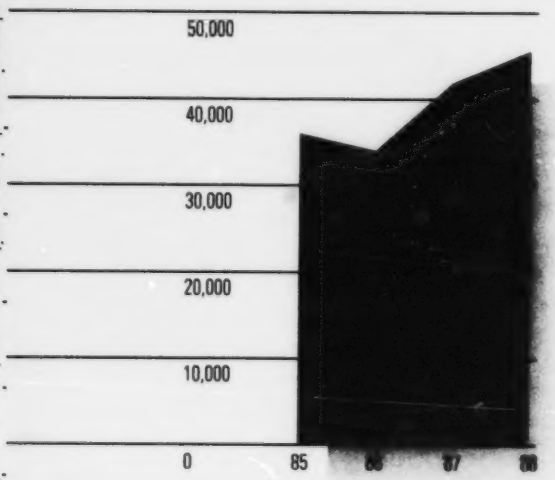
Total : $68,300,000

Despite the efforts devoted to prevention, the number of occupational injuries has continued to rise. Early in 1987, in an attempt to reverse the trend, the CSST initiated a large-scale campaign on prevention, targeting the companies with higher than average accident rates for their respective sectors. As a result, prevention and inspection activities have been stepped up to the point where the number of inspections has increased by 36% since 1986.

As part of the campaign, CSST inspectors visited roughly 2,300 establishments in 1987 and 1,856 in 1988 to help employers and workers find ways to improve conditions in the workplace. The effectiveness of this short-term action plan is evidenced by the fact that the accident rate in the establishments inspected has declined by an average of 12%.

The number of inspections has risen by 36% since 1986, following a major step-up of prevention and inspection activities.

Number of inspection visits — 1985-1988



The Commission's policy of getting all of its partners to think in terms of prevention is also part of a long-term perspective. For example, in response to the high rate of injury among workers aged 15 to 24 – who have an average of 12.2 injuries per 100 workers compared to 8.2 for their older colleagues – the CSST signed an agreement with the province's department of higher education and science to integrate health and safety-related issues into all of the vocational training programs given at the secondary school and college levels. There is every indication that if young people are made aware of the importance of prevention early on, they will be less liable to suffer an injury when they begin to work.

Since 1981, the CSST has also taken an active part in the development of SIMDUT, an information system on hazardous products in the workplace which was inaugurated in April 1989. SIMDUT is a pan-Canadian information network designed to protect workers handling hazardous materials. The Commission, which is responsible for applying the new regulations in Québec, has trained its inspectors in the enforcement of their provisions and has added to the Toxic Materials Index to meet the needs of its users.

Comparisons with Other Plans

The Québec occupational health and safety plan is the result of a societal choice, the product of the province's specific social, political and economic evolution. What distinguishes it the most from similar plans elsewhere in Canada is probably the fact that it covers all workers in all sectors of the economy, with the exception of professional athletes and domestics. In other words, the province's entire work force is protected against the consequences of industrial accidents and occupational diseases.

However, the health and safety plans in other Canadian provinces are comparable in many respects. Industrial accident and occupational disease insurance is exclusively government-run in all Canadian provinces and territories. Each provincial government has set up a public company to administer compensation programs for the victims of occupational injuries and manage an accident fund financed by the province's employers.

- **Québec is the only province in Canada to have an occupational health and safety plan that gives coverage to every worker in the work force except for professional athletes and domestics.**
- **In the Canadian provinces compared on the facing page, worker benefits are essentially the same except for the maximum level of insurable yearly earnings.**
- **In these provinces, expenditures related to occupational injuries have increased quite substantially over the last ten years.**

Workers covered by Canadian plans, by sector of economic activity

Alberta	British Columbia	Ontario	Québec	Saskatchewan
All, except for:	All, except for:	All, except for:	**All sectors**	All, except for:
Financial intermediaries and insurance	Financial intermediaries and insurance	Financial intermediaries and insurance		Agriculture (most workers)
Real estate services and insurance agencies	Real estate services and insurance agencies	Real estate services and insurance agencies		
Business services (almost all workers)	Business services (almost all workers)	Business services (almost all workers)		
Other services (most workers)	Other services (most workers)	Other services (most workers)		
Social services	Social services	Social services		
Agriculture (most workers)				

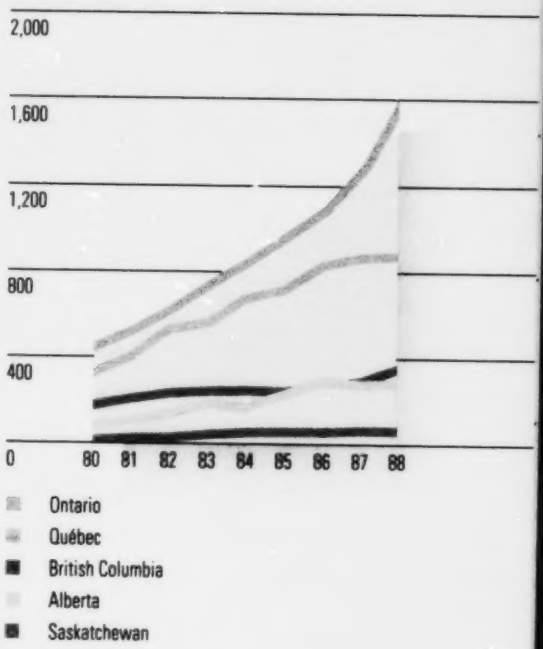
The similarities extend beyond the realm of organization. For example, between 1980 and 1988, injury-related expenditures increased substantially in Alberta (198.4%), Ontario (244.5%), Québec (158.8%) and Saskatchewan (126.6%), and to a lesser extent in British Columbia (83.8%).

In all of these provinces except British Columbia, compensation is based on 90% of net salary. There is no waiting period in either Alberta, Ontario or Québec, and compensation is automatically indexed everywhere but in Alberta. The most significant difference relates to maximum insurable yearly earnings: in 1989, the highest was in Saskatchewan ($48,000) and the lowest in Ontario ($36,600). Set at $38,000 in 1989, Québec's maximum insurable earnings level is among the lowest in the country.

Features of Canadian plans

	Maximum insurable yearly salary, 1989	Compensation base	Waiting period	Indexation of benefits
Alberta	$40,000	90% of net salary	None	By legislative amendment
British Columbia	$42,200	75% of gross salary	Day of accident	Twice yearly
Ontario	$36,600	90% of net salary	None	Once yearly
Québec	**$38,000**	**90% of net salary**	**None**	**Once yearly**
Saskatchewan	$48,000	90% of net salary	Day of accident	Once yearly

Spending on compensation — 1980-1988
(in millions of $)



In comparing average assessment rates, we must bear in mind that the industrial structure and the number of workers covered vary from one province to another. Certain trends nevertheless stand out: since 1980 in Ontario, 1983 in Saskatchewan and 1985 in Québec, the average rates have gradually gone up, while the average rate in Ontario has remained almost unchanged. The movement was in the opposite direction in British Columbia, where the rate has dropped significantly since 1985 and the province succeeded in reimbursing employers approximately $99 million in overpayments in 1988. There was no increase in the average rate in Québec in 1989.

- **Québec's assessment rate, set at $2.75 in 1989, is lower than the rate in Ontario and has been so for the last three years.**

- **A number of corrective measures taken since 1986 have significantly improved the capitalization ratio of the Québec plan, which reached 57.9% in 1988.**

Average assessment rates (%) – 1980-1989
(per $100 of insurable payroll)

	Alberta	British Columbia	Ontario	Québec	Saskatchewan
1980	1.62	2.15	1.62	**1.89**	1.42
1981	1.61	2.49	1.69	**2.10**	1.31
1982	1.71	2.71	1.86	**2.16**	1.22
1983	1.75	2.88	2.17	**2.05**	1.27
1984	1.68	2.88	2.31	**1.89**	1.27
1985	1.63	2.88	2.31	**1.88**	1.37
1986	1.56	2.41	1.65	**2.05**	1.44
1987	1.63	2.04	2.88	**2.50**	1.44
1988	1.60	1.75	3.02	**2.75**	1.56
1989	1.80	1.76	3.12	**2.75**	1.64

The capitalization ratio, i.e., the assets of a compensation board relative to its financial commitments, is an important indicator of the status of any insurance plan. While Saskatchewan's plan remained fully capitalized between 1980 and 1985, the ratios in Ontario, Québec and Alberta steadily declined over the same period. On the other hand, primarily as a result of an assessment rate policy based on the payment of the total cost of occupational injuries, the capitalization ratio in British Columbia has increased steadily and even exceeded 100% over the last three years. In Québec, since 1986, a number of corrective measures have led to a major improvement of the capitalization ratio, which stood at 57.9% in 1988.

Rate of capitalization (%) – 1980-1989

	Alberta	British Columbia	Ontario	Québec	Saskatchewan
1980	97.9	74.1	81.4	**78.3**	N.A.
1981	90.0	70.0	69.3	**77.5**	N.A.
1982	92.1	74.6	57.4	**73.6**	124.2
1983	85.8	76.3	49.3	**70.7**	109.9
1984	91.0	84.7	32.1	**61.5**	104.1
1985	90.8	98.7	31.7	**53.4**	102.9
1986	81.5	112.1	32.6	**50.1**	103.4
1987	78.9	110.4	35.6	**51.7**	104.3
1988	80.0	108.7	38.0	**57.9**	104.5

The situation is quite different in the United States. Although all of the states have legislation providing for compensation for industrial accident victims, only six of the plans are government monopolies. The insurance system is private in 32 states. Thirteen (13) states have mixed plans under which employers are required to take out insurance with an accredited insurance company or to contribute to a state fund. As a result, over 75% of all benefits are paid out by private insurance companies or by employers held legally responsible for their payment.

- **Every American state has workmen's compensation legislation, but only six have exclusive plans.**
- **About 85% of the American work force is covered by health and safety plans, but benefits for workers vary considerably from state to state.**
- **Occupational injury benefits and health-related expenditures increased more rapidly than the GDP or GNP in Québec and the rest of Canada.**

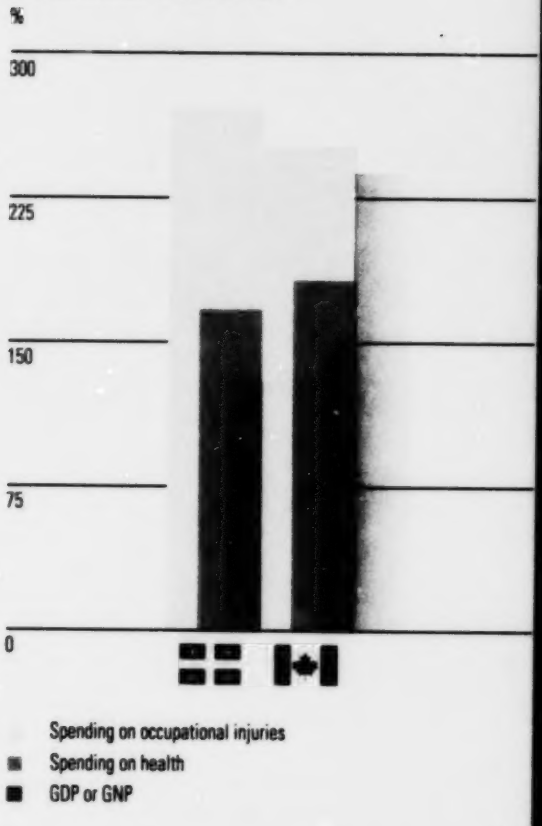
Features of American plans

	Type of plan	Adjusted average assessment rates	Compensation base	Waiting period
California	Mixed	2.83	66 ⅔% of gross income	3 days
Maine	Private	2.02	66 ⅔% of gross income	3 days
Massachusetts	Private	1.60	66 ⅔% of gross income	5 days
New York	Mixed	1.31	66 ⅔% of gross income	7 days
Ohio	Government monopoly	2.13	66 ⅔% to 72% of gross income	7 days

Roughly 85% of the work force is covered, but benefits vary a great deal from state to state. As in Canada, there is also considerable variation in assessment rates. In most states, the compensation base is 66 2/3 % of gross income, with a waiting period of up to seven days.

While comparisons do not constitute analysis as such, the same trends emerge in Québec and the rest of Canada when the costs generated by occupational injuries are seen in the broader macroeconomic context. Occupational injury benefit payments have increased much more quickly than the Gross Domestic Product (GDP) or Gross National Product (GNP). Also of interest in two respects is the fact that health-related expenditures have likewise grown faster than the GDP or GNP, although not as dramatically.

Change in GDP or GNP, spending on health, and spending on occupational injuries between 1976 and 1985



So, what do the statistics for the last ten years tell us? Several things, but two key facts stand out clearly: the increase in the number of occupational injuries and the rise in expenditures on compensation. How can these two phenomena be explained?

As far as compensation costs are concerned, the increase is linked to increases in the number of occupational injuries, the cost of living, medical expenses, etc. However, even if the rate of injuries went down – which is foreseeable given the gradual shift in employment toward the tertiary sector where the risk of injury is three times less than in the primary and secondary sectors – the decrease would not necessarily cause expenditures to drop. The lower incidence of injury could be accompanied by an increase in the seriousness of the injuries, because the time required to recover from an injury increases as workers get older. Consequently, despite the efforts to reduce the number of industrial accidents in the high-risk sectors, a number of factors that may come into play in the future make it difficult to predict how expenditures will evolve.

What is the explanation of the increase in the number of injuries? The first factor to take into consideratic.. is the number of workers covered by the plan. The figure has risen by 25% since 1981.

Secondly, advances in both science and medicine have made it possible to establish direct links between specific working conditions and particular physical conditions or diseases. By way of comparison, the Workmen's Compensation Act recognized 13 work-related diseases in 1931; the current legislation recognizes 43.

The definition of what constitutes an industrial accident or occupational disease has also become much broader, as decisions by the courts show. The concept of accidental occurrence, which is the cornerstone of the right to compensation, is being applied to a steadily increasing number of cases. The question as to whether certain health problems or diseases are caused by aging, congenital factors or working conditions is far from settled.

Finally, the heightened awareness of health and safety issues in the population has brought about a major change in the way people react. Expressions such as "the quality of life," and even "the quality of life in the workplace," have become part of everyday parlance. More health-conscious, more vigilant and better informed of our rights than in the past, we no longer hesitate – and will hesitate less and less as time goes on – to demand a work environment that is consistent with our needs.

Gouvernement
du Québec

QC 201 - 1411A